

PROCEEDINGS  
OF THE  
BIOLOGICAL SOCIETY OF WASHINGTONNEW CULICINE MOSQUITOES FROM THE  
PHILIPPINE ISLANDS  
(DIPTERA, CULICIDAE).<sup>1</sup>R. M. BOHART, LIEUTENANT (JG), H-V(S), USNR<sup>2</sup> AND  
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Through the courtesy of the Museum of Comparative Zoology at Harvard College, a collection of mosquitoes from Mt. Apo, Mindanao, was made available to the authors for study. This collection was found to contain a new species of *Armigeres*, two new species of *Tripteroides* and two male specimens of *Aedes* which agree closely with the description of *Aedes uncus* (Theobald). In the course of comparing this material with the collection of Philippine *Tripteroides* in the U. S. National Museum, an additional new species was found.

*Armigeres apoensis*, n. sp.

*Male*.—Length 5.5 mm., wing 4.2 mm. Vertex with broad median area covered with dark brown broad appressed scales with median spot of whitish upright and broad appressed scales; eyes with a narrow border of pale broad appressed scales, broadening laterally into a pale area partially surrounding a smaller dark area. Torus with small whitish broad scales. Clypeus dark brown, bare. Palpus and proboscis dark and about equal in length. Scutum brown mostly covered with very slender brown scales. Slender to crescent-shaped pale scales forming narrow median line extending onto scutellum, posterior submedian lines, and border of white scales on margin of scutum anterior to wing bases (figure 11). Scutellum mostly with dark broad scales and with posterior extension of median pale line of scutum. Anterior pronotal lobe with whitish broad appressed scales, posterior pronotum with broad

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appressed and a few narrow curved whitish scales. Pleuron brown, with dense patches of whitish scales, postspiracular scales whitish only. Wing scales dark. Coxae with patches of whitish scales; each femur with ventral pale stripe, broadest on hind leg; tibiae and tarsi dark. Dorsum of abdomen dark, tergites with lateral basal pale area; venter mostly pale. Genitalia as in figure 15. Mesosome relatively broad and truncate apically; lobe of basistyle with three strong setae; dististyle broadened, sub-triangular, with 15-19 teeth.

*Female*.—Similar to male. Palpus slightly more than  $\frac{1}{4}$  length of proboscis. Scutum with pale margin as in male (remainder of scutum mostly denuded).

*Type*.—Male, Sibulan River, 7000-8000 feet, Mt. Apo, Mindanao, Philippine Islands, September 23 (C. S. Clagg), in Museum of Comparative Zoology.

*Paratypes*.—13 ♂♂, 1 ♀, same locality and collector as type, August 30-September 23, Museum of Comparative Zoology and U. S. National Museum.

This species seems to be closely related to *aurolineatus* Leicester and *manalangi* Baisas in that all three have a broadened trianguloid dististyle and three setae on the inner median lobe of the basistyle. The diagnostic differences can be outlined as follows:

*A. aurolineatus*<sup>4</sup>—(1) Basistyle with inner apical tuft of thickened hairs, (2) single bristle on outer margin of dististyle, (3) three slender setae on inner median lobe of basistyle, (4) mesosome apically with two outwardly directed prongs, (5) scutum with anterior submedian lines and posterior sublateral lines.

*A. apoensis*—(1) Basistyle with no definite inner apical tuft of thickened hairs, (2) five bristles on outer margin of dististyle, (3) three stout setae on inner median lobe of basistyle (figure 15), (4) mesosome broadly rounded or truncate apically and with border of tooth-like projections (figure 15), (5) scutum with median line and posterior sublateral lines (figure 11).

*A. manalangi*<sup>5</sup>—(1) Basistyle with no definite inner apical tuft of thickened hairs but with dense tuft of hairs along inner apical half, (2) five bristles on outer margin of dististyle, (3) three moderately stout setae on inner median lobe of basistyle, (4) mesosome narrowly rounded apically and with border of tooth-like projections, (5) scutum apparently without median, submedian, or sublateral lines. (Baisas described no such lines from his reared type material.)

#### *Tripteroides antennalis*, n. sp.

*Male*.—Vertex with dark broad appressed scales, iridescent dark blue in anterior view and with extreme lateral pale spot; a row of upright dark scales on anterior margin of nape. Torus bare; flagellum with about 30-40 hairs per segment on first six segments; the basal five seg-

<sup>4</sup> From examination of a series of 2 ♀♀, 2 ♂♂, Sarawak, Borneo (determined by F.W. Edwards, 1928).

<sup>5</sup> According to F. E. Baisas (1935), Philippine Journal of Science, vol. 56, p. 492.

ments distinctly shortened and thickened; some of the hairs of the basal six segments shortened and apically curled, forming a dense inner tuft; many of the other hairs curled apically (figure 10). Proboscis and palpus dark; proboscis almost 1-1/3 length of front femur, basal 2/5 strongly depressed; palpus about length of clypeus. Scutum with brown integument, paler laterally, and with dark hairlike scales. Scutellum with dark slightly iridescent broad appressed scales. Postnotum dark brown, bare. Anterior pronotal lobe with dark broad appressed scales, posterior pronotum with yellowish brown integument and dark hairlike scales. Pleuron dark brown, with scattered areas of silvery scales. Wing scales dark. Coxae with silvery patches; front femur dorsally with basal streak and two silvery spots on apical half; mid and hind femora similar but without basal streak; tibiae and tarsi dark; front tarsal claws simple. Abdominal tergites with very dark scales and small apical lateral silvery spots. Genitalia as in figures 2 and 14.

*Type*.—Male, Sibulan River, 7000-8000 feet, Mt. Apo, Mindanao, Philippine Islands, September 25 (C. S. Clagg), in Museum of Comparative Zoology. This species differs from all known species of *Tripteroides* in its peculiar antenna (figure 10). Although distinctly different from other Philippine species, it resembles *powelli* (Ludlow) in the spotted femora and dark postnotum. *T. antennalis* differs from it, however, in the darker blue vertex and the smaller silvery abdominal spots.

#### *Tripteroides claggi*, n. sp.

*Male*.—Length about 3.5 mm., wing 3 mm. Anterior half of vertex covered with white broad appressed scales, iridescent blue from anterior view; posterior half of vertex dark with some erect scales. Torus bare, flagellum with about 8-10 long hairs per segment. Palpus and proboscis dark, proboscis 1-1/3 length of front femur, palpus twice the length of clypeus. Scutum with dark brown integument (mostly denuded); scales, at least on anterior margin, yellowish. Scutellum with dark iridescent broad appressed scales. Postnotum bare or denuded. Anterior pronotal lobe with iridescent bluish broad appressed scales, posterior pronotum with dull whitish broad appressed scales. Pleuron mahogany brown, with patches of silvery translucent scales. Wing scales dark. Coxae with silvery patches, femora pale ventrally with indications of pale spots, tibiae and tarsi dark, larger front tarsal claw with tooth at apical third. Abdomen clothed with very dark scales. Genitalia as in figures 5 and 13.

*Type*.—Male, Sibulan River, 7000-8000 feet, Mt. Apo, Mindanao, Philippine Islands, August 31 (C. S. Clagg), in Museum of Comparative Zoology.

This species appears to be closely related to *similis* (Leicester) from Malaya and India but differs from it in having iridescent blue scales on the anterior pronotal lobes, in the ornamentation of the vertex, the presence of minute bristles over the entire length of the dististyle, and in the greater length of the lobes of the ninth tergite. It is the only

known Philippine *Tripteroides* with the anterior half of the vertex with white scales.

***Tripteroides dyari*, n. sp.**

*Rachionotomyia monetifera* Dyar 1920 (♂ only). *Insecutor Inscitiae* Menstruus, vol. 8, p. 176.

*Rachionotomyia powelli* Ludlow, Dyar 1925 (in part). *Insecutor Inscitiae* Menstruus, vol. 13, p. 72.

*Male*.—Length about 3.0 mm., wing 2.2 mm. Vertex mainly clothed with iridescent light blue broad appressed scales, posteriorly with dark appressed and dark upright scales, and laterally with patch of whitish scales. Torus bare, flagellum with about 10 long hairs per segment. Proboscis and palpus brown, proboscis 1-1/2 length of front femur, palpus about twice length of clypeus. Integument of entire thorax yellowish brown. Scutum and posterior pronotum with dark hairlike scales. Scutellum with iridescent broad appressed scales. Postnotum bare. Anterior pronotal lobe with dark broad appressed scales. A large silvery triangular patch on sternopleuron, scattered translucent scales on mesepimeron. Wing scales dark. Coxae with silvery patches; femora dorsally with basal streak and two silvery spots on apical half, less distinct on hind legs; tibiae and tarsi dark. Abdominal tergites with very dark scales and transverse lateral apical silvery spots. Genitalia as in figures 3 and 12.

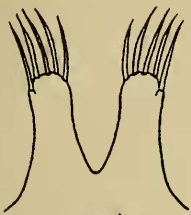
*Type*.—Male (U. S. National Museum No. 57106), Los Banos, Laguna, Luzon, Philippine Islands.

The type specimen of this species was originally designated by Dyar as one of the three type specimens of *monetifera*. However, in 1925 he pointed out that it differed from *monetifera* and identified it as *powelli*. Actually, it is specifically distinct, differing from *powelli* in that it lacks the mahogany markings of the pleuron of *powelli*, and from *monetifera* in having the scales of the anterior pronotal lobes dark instead of opalescent as in *monetifera*.

Of the two type females of *monetifera* in the U. S. National Museum, the perfect specimen (the other is headless) is herein designated as the lectotype.

EXPLANATION OF PLATE

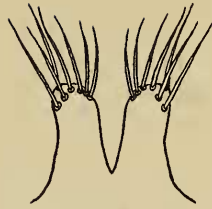
Figs. 1-6, ninth tergite of male *Tripteroides*. Fig. 1, *powelli* (Ludlow); fig. 2, *antennalis* n. sp.; fig. 3, *dyari* n. sp.; fig. 4, *microcala* (Dyar); fig. 5, *claggi* n. sp.; fig. 6, *nepenthicola* (Banks). Figs. 7-9, dististyle of male genitalia of *Tripteroides*. Fig. 7, *powelli*; fig. 8, *microcala*; fig. 9, *nepenthicola*. Fig. 10, *Tripteroides antennalis*; male, inner view of basal six flagellar segments of left antenna. Fig. 11, *Armigeres apoensis* n. sp., dorsal view of scutum. Figs. 12-14, male genitalia of *Tripteroides*, right side, ventral view. Fig. 12, *dyari*; fig. 13, *claggi*; fig. 14, *antennalis*. Fig. 15, *Armigeres apoensis*, ventral view of right side of male genitalia, and dististyle enlarged.



1. powelli



2. antennalis



3. dyari



4. microcala



5. claggi



6. nepenthicola



7. powelli



8. microcala



9. nepenthicola



10. antennalis



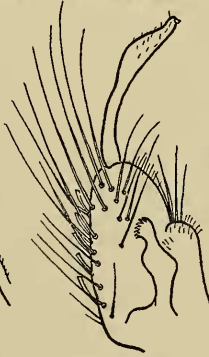
11. apoensis



12. dyari



13. claggi



14. antennalis



15. apoensis